

CLAIMS

The invention claimed is:

1. An automotive vehicle, convertible roof system comprising:
a roof bow movable from a raised position to a retracted position;
a window assembly movable from a raised position to a retracted position;
and
a control member operably attaching the window assembly to the roof bow, the control member including a living hinge.
2. The system of Claim 1 wherein the window assembly further comprises a back window.
3. The system of Claim 2 wherein the control member positions the back window relative to the roof bow during retraction.
4. The system of Claim 1 wherein the window assembly further comprises an elastic retaining member secured around a periphery of a window, the retaining member acting as a weather seal, and the control member being attached to the retaining member.

5. The system of Claim 4 further comprising a fabric roof cover externally covering and being retractable with the roof bow, and the roof cover being attached to the retaining member.

6. The system of Claim 1 wherein the window assembly includes a three-dimensionally curved and rigid glass panel.

7. The system of Claim 1 wherein the control member is polymeric.

8. The system of Claim 1 wherein the roof bow is a number four roof bow.

9. The system of Claim 1 wherein the control member upwardly extends toward the roof bow substantially above and forward from an upper peripheral edge of the window assembly when in the raised positions.

10. The system of Claim 1 further comprising a lost-motion coupling acting to connect the control member to the roof bow.

11. An automotive vehicle, convertible roof system comprising:
a retractable roof bow;
a retractable window; and
a control member coupling the window to the roof bow, the control member being polymeric and attaching to the roof bow substantially above and forward from an upper peripheral edge of the window.
12. The system of Claim 11 further comprising a lost-motion coupling connecting the control member to the roof bow.
13. The system of Claim 12 wherein the lost-motion coupling includes an elongated slot and a structure riding in the slot.
14. The system of Claim 12 wherein the lost-motion coupling assists in controlling the movement of the window relative to the roof bow during retraction.
15. The system of Claim 11 wherein the control member includes a flexible living hinge.
16. The system of Claim 11 wherein the roof bow is a number four roof bow.

17. The system of Claim 11 wherein the window is a three-dimensionally curved back window.

18. A convertible roof comprising:

a set of retractable roof bows;

a fabric cover supported by the roof bows;

an assembly including a substantially rigid panel positioned along a substantially cross-car and substantially vertical plane when fully raised; and

a control link attaching an upper periphery of the panel to a cross-car section of at least one of the roof bows when raised, the control link including a hinge.

19. The roof of Claim 18 further comprising a lost-motion coupling connecting the control link to one of the roof bows.

20. The roof of Claim 19 wherein the lost-motion coupling includes an elongated slot and a structure riding in the slot.

21. The roof of Claim 19 wherein the lost-motion coupling assists in controlling the movement of the panel relative to at least one of the roof bows during retraction.

22. The roof of Claim 18 wherein the panel is a window.
23. The roof of claim 22 wherein the window is a rigid back window.
24. The roof of Claim 18 wherein the assembly includes a gasket extending around the periphery of the panel.
25. The roof of Claim 24 wherein an end of the control link is attached to the gasket.
26. The roof of Claim 18 wherein a majority of the control link is polymeric and the hinge is a flexible narrowed thickness of the control link.
27. A back window control link comprising:
a semi-annular end section including an elongated slot;
a central section made of a polymeric material and including a reduced thickness living hinge; and
a back window attaching section located on an opposite side of the living hinge from the semi-annular end section.
28. The link of Claim 27 further comprising a metallic fastener extending through the back window attaching section which is polymeric.

29. A method of operating a convertible roof of an automotive vehicle having a roof bow, a control member, a back window and a fabric cover, the method comprising:

- (a) retracting the convertible roof;
- (b) flexing a portion of the control member during step (a);
- (c) loosening the fabric cover during step (a); and
- (d) limiting the movement of the back window relative to the roof bow during step (c).

30. The method of Claim 29 further comprising rotating a section of the control member around a cross-car section of the roof bow.

31. The method of Claim 29 wherein at least a majority of the control member is polymeric and the back window is three-dimensionally curved glass.

32. The method of Claim 29 further comprising causing the control member to guide an upper portion of the back window in a substantially rigid manner in an elongated direction of the control member while flexing the control member substantially perpendicular to the elongated direction.